2", because a polydispersity of at most 2 clearly encompasses a polydispersity of at most 2.0. Moreover, a polydispersity of 2.0, finds explicit support for example on page 49, line 29 of the instant specification. Entry of these claims is respectfully requested.

REMARKS

Claims 29-48, and 50-54 are pending in the application.

Claims 29-48 and 50-53 have been rejected.

Claims 29 has been amended.

Claims 28-48 and 50-53 are kept unchanged.

Claim 54 has been added.

The rejection of claims 29-53 under 35 U.S.C. § 102 (b) as being anticipated by Himori et al. (EP 296850), is respectfully traversed and is addressed in light of the comments below.

Himori et al. describe making AB type block copolymers by a process using UV-radiation.

Applicants submits that the added limitation in amended claim 29: - -said block polymers have a polydispersity index of at most 2.0- -makes it clearer that the instant claimed process is distinct from Himori's teaching and, thus, is not anticipated by Himori et al. Applicant has already given evidence in his previous amendment that Himori et al. disclose block copolymers having a polydispersity index of more than 2,0.

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For the reasons discussed above, Applicant respectfully requests that the Examiner now reconsider and withdraw the rejection of claims 29-53 under 102(b) as being anticipated by Himori et al. (EP 296850).

Claims 29-53 are rejected under 35 U.S.C. 102(b) as being anticipated by, or, in the alternative, under 35 U.S.C. § 103 (a) as being unpatentable over Tatsuya et al. (JP 04198303).

Applicant maintains his arguments set forth in his previous amendment.

The reference describes many polymerization initiators and groups comprised therein. Applicant submits that the only relevant groups are dithiocarbamate groups of formula (10), noticed by the Examiner in the Office Action. Compounds described in Preparative Examples 1-24 are simple polymerization initiators.

Practical Example 30 describes the preparation of a A-B-A block copolymer wherein block A is a polystyrene block and block B is a poly(propylene glycol) block (see on page 28, paragraph before table 3), by polymerizing styrene monomers in the presence of a macromolecular initiator comprising dithiocarbamate groups at both chain ends.

According to that example 30, 800ml/mn of HBr are added. Thus 500x60 = 30,000 cc of HBr. One mole of gaz equals 22.4 l = 22,400 cc, in normal conditions of temperature and pression, which comes to: 30,000/ 22,400 = 1.33 mole of HBr.

10 parts of PPG poly(propylene glycol) (MW = 1,000) represents 10/1,000 = 0.01 mole of PPG with two OH functions per molecule of PPG and the number of moles of HH = 2 x 0.01 = 0.02 mole of OH.

Therefore, there is a great excess of HBr per OH, which is corroborated by the fact that HBr was removed under reduced pressure. Thus, as indicated in the previous amendment, the product obtained in example 30 can only be derived from a PPG with a carbamate function at each end of the PPG chain, and, for that reason, must be a di-functional compound. Therefore, Examiner's assertion that a mono-functional PPG may be obtained, cannot occur and it is impossible to obtain a diblock, but only a triblock.

In a nutshell, according to Tatsuya's process:

1- a PPG poly(propylene glycol) is first prepared, then

2- a dithiocarbamate is chemically drafted on each OH located at both extremities of the PPG chain, and, then,

3- the second block(s) is (are) added.

That process is utterly different from the instant claimed process involving a mono-functional dithiocarbamate precursor of formulae IIA or IIB, having only one dithiocarbamate function at only one chain extremity.

For the reasons discussed above, Applicant respectfully requests that the Examiner now reconsider and withdraw the rejection of claims 29-53 under 35 U.S.C. 102(b) as being anticipated by, or, in the alternative, under 35 U.S.C. § 103 (a) as being unpatentable over Tatsuya et al. (JP 04198303).

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In view of the preceding remarks, it is asserted that the patent application is in condition for allowance. Should the Examiner have any question concerning these remarks that would further advance prosecution of the claims to allowance, the Examiner is cordially invited to telephone the undersigned attorney at (609) 860-4180. A notice of allowance is respectfully solicited.

Respectfully submitted,

April 23, 2003

By _____
JEAN-LOUIS SEUGNET
Limited Recognition under 37 CFR § 10.9(b)
enclosed

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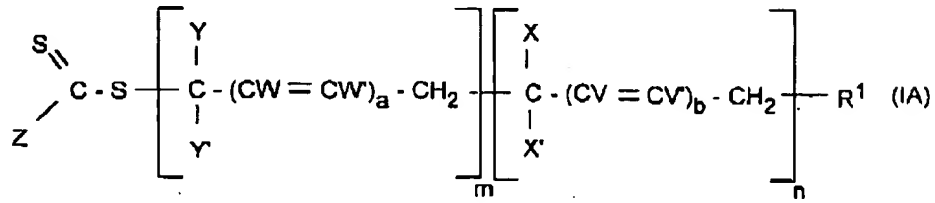
AMENDMENT

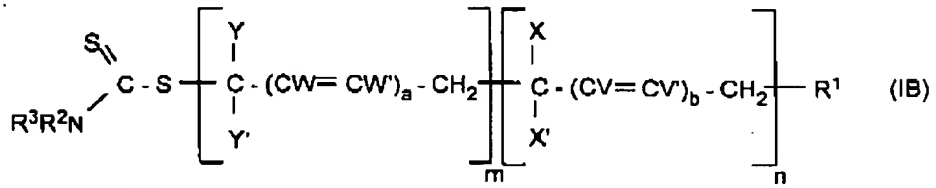
Marked-up amended claims

Please amend claim 29 as follows:

29. (Twice amended) A process for preparing block polymers of general formula (IA) or (IB):



(IA)



(IB)

in which formulae:

- $\mathbf{R^1}$ represents:

an optionally substituted alkyl, acyl, aryl, alkene or alkyne group (i),

an optionally substituted or aromatic, saturated or unsaturated, carbocycle (ii), or

an optionally substituted or aromatic, saturated or unsaturated, heterocycle (iii),

optionally, these groups and rings (i), (ii) and (iii) are substituted with substituted phenyl groups, substituted aromatic groups, or groups: alkoxycarbonyl or aryloxycarbonyl (-COOR), carboxyl (-COOH), acyloxy ($-O_2CR$), carbamoyl ($-CONR_2$), cyano (-CN), alkylcarbonyl, alkylarylcarbonyl, arylcarbonyl, arylalkylcarbonyl, phthalimido, maleimido, succinimido, amidino, guanidimo,

hydroxyl (-OH), amino ($-NR_2$), halogen, allyl, epoxy, alkoxy (-OR), S-alkyl, S-aryl, organosilyl, groups having a hydrophilic or ionic character,

R representing an alkyl or aryl group,

- **Z** is an optionally substituted ring comprising a nitrogen atom via which Z is linked to the C(=S)-S- group of formula (IA), the other atoms of said ring inducing a delocalizing or electron-withdrawing effect with respect to the electron density of the nitrogen atom,

-$\mathbf{R^2}$ and $\mathbf{R^3}$, which are identical or different, represent:

an optionally substituted alkyl, acyl, aryl, alkene or alkyne group (i),

an optionally substituted or aromatic, saturated or unsaturated, carbocycle (ii), or

an optionally substituted, saturated or unsaturated, heterocycle (iii),

optionally, these groups and rings (i), (ii) and (iii) are substituted with:

- substituted phenyl groups or substituted aromatic groups,
- groups: alkoxycarbonyl or aryloxycarbonyl (-COOR), carboxyl (-COOH), acyloxy ($-O_2CR$), carbamoyl ($-CONR_2$), cyano (-CN), alkylcarbonyl, alkylarylcarbonyl, arylcarbonyl, arylalkylcarbonyl, phthalimido, maleimido, succinimido, amidino, guanidimo, hydroxyl (-OH), amino ($-NR_2$), halogen, allyl, epoxy, alkoxy (-OR), S-alkyl, S-aryl,
- groups having a hydrophilic or ionic character,

R representing an alkyl or aryl group,

and, for at least R^2 or R^3, these groups and rings (i), (ii) and (iii) induce a delocalizing or electron-withdrawing effect with respect to the electron density of the nitrogen atom to which R^2 and R^3 are linked,

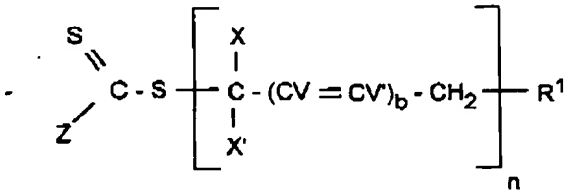
- V, V', W and W', which are identical or different, represent: H, an alkyl group or a halogen,
- X, X', Y and Y', which are identical or different, represent H, a halogen, a group R', OR', OCOR', NHCOH, OH, NH_2, NHR', $N(R')_2$, $(R')_2N^+O^-$, NHCOR', CO_2H, CO_2R', CN, $CONH_2$, CONHR' or $CONR'_2$, wherein R' is alkyl, aryl, aralkyl, alkaryl, alkene or organosilyl groups, optionally perfluorinated and optionally substituted with one or more carboxyl, epoxy, hydroxyl, alkoxy, amino, halogen or sulphonic groups,
- a and b, which are identical or different, are equal to 0 or 1,
- m and n, which are identical or different, are greater than 1, the individual repeat units being identical or different,

said process comprising the step of bringing into contact with each other:

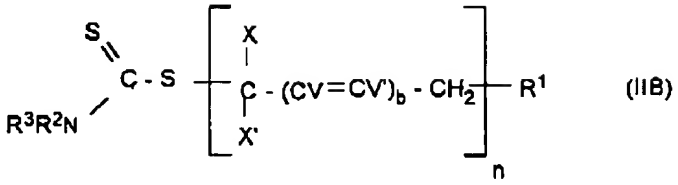
- an ethylenically unsaturated monomer of formula:

  $CYY'(=CW\text{-}CW')_a=CH_2$,

- a precursor compound of general formula (IIA) or (IIB):



(IIA)



(IIB)

wherein Z, X, X', Y, V', R^1, R^2 and R^3 have the same meaning, and b and n the same value, as previously; and

- a radical polymerization initiator compound, and wherein said block polymers have a polydispersity index of at most 2.0.

Please add new claim 54 as follows:

54. (New) A process according to claim 29, wherein the polydispersity index is of at most 1.5.